STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 022006-010 Project Number: 2005-11-030 PORT-0503

Owner: Hutchens Construction Company

Owner's Address: 600 Mill Street, Cassville, MO 65625

Installation Name: Hutchens Construction Company

Installation Address: Farm Road 2060 (4 miles NE of Purdy), Purdy, MO 65734

Location Information: Barry County, S34, T25N, R27W

Application for Authority to Construct was made for:

The modification of an existing portable asphalt plant to apply Best Management Practices (BMPs) and allow for additional plants on site. Asphalt is produced through a Drum Mix Dryer. The portable asphalt plant has a maximum hourly design rate (MHDR) of 350 tons per hour (tph). This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☑ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

FEB 16 2006
EFFECTIVE DATE

James L. Kavanaugh
DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

MO 780-1204 (1-03)

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

GENERAL SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority"; by 10 CSR 10-6.010 "Ambient Air Quality Standards" and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3. Furthermore, one or more of the Subparts of 40 CFR Part 60, New Source Performance Standards (NSPS), applies to this installation.

1. Portable Equipment Identification Requirement
   To assure that each component is properly identified as being a part of this portable asphalt plant, (PORT-0503) Hutchens Construction Company shall provide and maintain suitable, easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable asphalt plant.

2. Relocation of Portable Asphalt Plant
   A. If this portable asphalt plant moves from the initial site reviewed in this permit (Purdy Quarry, Site ID No: 009-0042), then the portable asphalt plant shall not be operated at any site location longer than 24 consecutive months without an intervening relocation.
   B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable asphalt plant.
      1.) If the portable asphalt plant is moving to a site previously permitted, and if there are no other new plants at the site, then the application must be received by the Air Pollution Control Program at least seven (7) days prior to the relocation.
      2.) If the portable asphalt plant is moving to a new site, or if there are other plants or equipment at the site that have not been evaluated for concurrent operation, then the application must be received by the Air Pollution Control Program at least twenty-one (21) days prior to the relocation. The application must include written notification of any concurrently operating plants.

3. Operating Permit Applicability
   If this portable asphalt plant does not move from the initial site (Purdy Quarry, Site ID No: 009-0042) within 24 consecutive months, then Hutchens Construction Company shall submit an operating permit application. The Air Pollution Control Program must receive this application no later than 30 days after the exceedance of the 24 months.

4. Record Keeping Requirement
   The operator(s) shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

5. Superseding Condition
   The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) (052004-015) from the Air Pollution Control Program.

SITE-SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

Site ID No.: 009-0042
Site Name: Purdy Quarry
Site Address: Farm Road 2060 (4 miles NE of Purdy), Purdy, MO 65734
Site County: Barry County, S34, T25N, R27W

1. Best Management Practices
   Hutchens Construction Company shall control fugitive emissions from all of the haul roads and stockpiles at this site by performing *Best Management Practices*, which include the usage of paving, chemical dust suppressants, or documented watering. These practices are defined in Attachment AA.

2. Baghouse(s) Control System Requirements
   A. Hutchens Construction Company shall install and operate baghouse(s) to restrict the emission of particulate matter. The baghouse(s) must be used whenever these units are in operation. The baghouse(s) shall be installed on the following units: Mineral Filler Silo and Drum Dryer.
   B. Hutchens Construction Company shall install instruments to monitor the operating pressure drop across the baghouse. All instruments and control equipment shall be calibrated, maintained and operated according to the manufacturer's preventive maintenance recommendations. The operator(s) shall check and record the pressure drop across the baghouse filter once per operating day during silo loading. The baghouse operating pressure drop shall be maintained between 1" to 6" of water column.
   C. The operator(s) shall conduct and document a quarterly inspection and maintenance of the baghouse for structural component failures, for leaks and wear, and for the cleaning sequence of the baghouse. Replacement bags shall be kept on hand at all times to replace defective bags (The bags shall be made of fibers appropriate for the operating conditions expected to occur). All inspections, corrective actions, and instrument calibrations shall be recorded.

3. Performance Testing for New Source Performance Standards (NSPS)
   A. Hutchens Construction Company shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart "I". Hutchens Construction Company shall contact the Enforcement section to obtain all requirements for testing, and the plan must be submitted to the Enforcement section at least 30 days prior to the proposed test date.
   B. Testing must be performed no later than 60 days after achieving the maximum production rate of the process, and in any case no later than 180 days after initial startup. Testing shall be performed at no less than 90% of the maximum production rate. The performance test results shall be submitted to the Enforcement section no later than 30 days after completion of any required testing.

4. Prohibition Against Concurrent Operations Without Further Air Pollution Control Program Review
   The portable asphalt plant (PORT-0503) is prohibited from operating whenever any other plant(s) are located at this site, except for the following four (4) plants:
   A. Hutchens Portable Rock Crushing Plant, PORT-0510, Project # 2005-11-078
   B. Hutchens Portable Rock Crushing Plant, PORT-0407, Project # 2005-11-031
   C. Hutchens Portable Asphalt Plant, PORT-0412, Project # 2005-11-032
   D. Hutchens Portable Grizzly Operation, PORT-0408, Project #2005-11-033

5. Restriction on Minimum Distance to Nearest Property Boundary
   The primary emission point of the portable asphalt plant, which is the drum mix dryer, shall be located at least 780 feet from the nearest property boundary whenever it is operating at this site.

6. Record Keeping Requirement
   The operator(s) shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

SITE-SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

7. Reporting Requirement
The operator(s) shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Hot Mix Asphalt (HMA) is composed of non-metallic aggregate, sand, mineral filler and other materials with liquid asphaltic cement. These materials are mixed and heated/dried in the drum dryer. Processed HMA is delivered as sellable product. Best Management Practices are used to control fugitive emissions from all haul roads and stockpiles. Electric line power is the only source of electric power for the equipment. The emission points are listed in the attached spreadsheet summary. This installation is classified under the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2, Item 27]. The installation is located in Barry County, an attainment area for all criteria air pollutants.

This installation has been at Purdy Quarry, its initial installation, since 2004. (This permit does not give PORT-0503 an additional two years at Purdy Quarry.) If PORT-0503 remains at this site beyond February 17, 2006, it must relocate or apply for an operating permit. If an operating permit is issued, PORT-0503 would then be considered stationary because it would have an operating permit, even though it would still retain its portable number.

The permits for all of the other installations at this site were simultaneously modified to apply Best Management Practices and to allow Hutchens portable concrete plant PORT-0510 to relocate to this site. Since all of these permits for Purdy Quarry will receive new permit numbers upon issuance, the references to such permit numbers were omitted from the permits. Instead, these permits for concurrent operations at Purdy Quarry are referenced by their project numbers.

Table 1. Other Permits Issued for PORT-0503

Permit Number	Completed	Description
052004-015	2004	Section 5

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, emission factors and control device efficiencies. The sources of the emission factors and control efficiencies are listed in the section “Permit Documents”. Based on the potential emissions, the operation is considered a minor source under 10 CSR 10-6.060 section (6).

The inherent moisture content of the rock will reduce particulate emissions. Hutchens Construction Company provided documentation of testing results conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other methods approved by the Director.

Table 2. Emissions Summary (tons per year)

Air Pollutant	Regulatory *De Minimis* Levels	Existing Actual Emissions (2004 EIQ)	Potential Emissions of the Application	*New Installation Conditioned Potential
PM_{10}	15.0	0.081	40.20	40.20
SOx	40.0	0.14	21.59	21.59
NOx	40.0	0.67	85.63	85.63
VOC	40.0	0.39	49.07	49.07
CO	100.0	1.6	199.62	199.62
HAPs	10.0/25.0	0.015	6.01	6.01

* Conditioned potential based on annual limit for NO_x needed to avoid modeling. Other pollutants proportionately reduced, and CO indirectly limited to below *de minimis*.

AMBIENT AIR QUALITY IMPACT ANALYSIS

The National Ambient Air Quality Standard (NAAQS) requires the ambient impact from any site to be less than 150 $\mu g/m^3$ of particulate matter less than ten microns (PM_{10}) at or beyond the nearest property boundary in any single 24-hour period. Screening tools were used to evaluate this impact. Since this source agreed to use Best Management Practices (BMPs), as defined in Attachment AA, haul roads and stockpiles were not modeled with screening tools. They were instead addressed as a background level of 20 $\mu g/m^3$ of PM_{10}. The remaining process emissions are therefore limited to an impact of less than 130 $\mu g/m^3$ of PM_{10} at or beyond the nearest property boundary. However, the maximum ambient impact was estimated to be 4.64 $\mu g/m^3$, which is far below the NAAQS requirement, even when combined with the other plants at this site. Therefore, this installation has no production limit and no daily ambient PM_{10} impact record keeping requirements while at this site.

Since the installation conditioned potential was above the *de minimis* levels for NO_x and CO, ambient air quality modeling was performed to determine the impact of these pollutants. Shown in Table 3, the results of this modeling show the site complies with the annual average concentration of NO_x and with the 1-hour and 8-hour average concentrations of CO at the property boundary. Therefore, no monthly record keeping is required for PORT-0503. If the stack parameters used in the modeling had not been available, these pollutants would have to be limited to less than *de minimis* levels through monthly record keeping.

Table 3. Ambient Impact Analysis for Pollutants above *De Minimis* Levels

Pollutant	Modeled Impact (µg/m3)	NAAQS (µg/m3)	Time Period
CO	103	40,000	1-h average
CO	72	10,000	8-h average
NOx	4	100	Annual average

APPLICABLE REQUIREMENTS

The owner is subject to compliance with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements.

- *Submission of Emission Data, Emission Fees and Process Information,* 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- If this portable asphalt plant remains at the initial site reviewed in this permit longer than 24 consecutive months, then the owner shall submit an Operating Permit Application. The Air Pollution Control Program must receive this application no later than 30 days after the exceedance of 24 months.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- 40 CFR Part 60 Subpart "OOO", *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS)
- The National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the currently promulgated Maximum Achievable Control Technology (MACT) regulations do not apply to the proposed equipment.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Jeannie Kozak
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Hutchens Construction Company as the owner and operator of the installation.
- Environmental Protection Agency (EPA) AP-42, *Compilation of Air Pollutant Emission Factors; Volume I, Stationary Point and Area Sources, Fifth Edition.*
- Noyes Data Corp. book, Orlemann, et al.1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Southwest Regional Office Site Survey.
- Best Management Practices

Attachment AA: Best Management Practices (BMPs)- Construction Industry Fugitive Emissions

Construction Industry Sites covered by the Interim Relief Policy shall maintain Best Management Control Practices (BMPs) for fugitive emission areas at their installations when in operation. Options for BMPs are at least one of the following:

For Haul Roads:

1. Pavement of Road Surfaces –
   - A. The operator(s) may pave all or any portion of the haul roads with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve "Control of Fugitive Emissions[1]" while the plant is operating.
   - B. Maintenance and/or repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
   - C. The operator(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Usage of Chemical Dust Suppressants –
   - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the unpaved portions of the haul roads. The suppressant will be applied in accordance with the manufacturer's suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
   - B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
   - C. The operator(s) shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

3. Usage of Documented Watering –
   - A. The operator(s) shall control the fugitive emissions from all the unpaved portions of the haul roads at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating. For example, the operator(s) shall calculate the total square feet of unpaved vehicle activity area requiring control on any particular day, divide that product by 1,000, and multiply the quotient by 100 gallons for that day.
   - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operation (e.g., meteorological situations, precipitation events, freezing, etc.)
   - C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
   - D. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads. The operator(s) shall record a brief description of such events in the same log as the documented watering.
   - E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

[1] For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)

For Vehicle Activity Areas around Open Storage Piles:

1. Pavement of Stockpile Vehicle Activity Surfaces –
   - A. The operator(s) may pave all or any portion of the vehicle activity areas around the storage piles with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve control of fugitive emissions while the plant is operating.
   - B. Maintenance and/or repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
   - C. The operator(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Usage of Chemical Dust Suppressants –
   - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the vehicle activity areas around the open storage piles. The suppressant will be applied in accordance with the manufacturer's suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
   - B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
   - C. The operator(s) shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

3. Usage of Documented Watering –
   - A. The operator(s) shall control the fugitive emissions from all the vehicle activity areas around the storage piles at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating. (Refer to example for documented watering of haul roads.)
   - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operations (e.g., meteorological situations, precipitation events, freezing, etc.)
   - C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
   - D. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads. The operator(s) shall record a brief description of such events in the same log as the documented watering.
   - E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.